MA33L(85)-1

CURRENT INDUSTRIAL REPORTS

Insulated Wire and Cable

1985

MA33L(85)-1
Issued August 1986

U.S. Department of Commerce
BUREAU OF THE CENSUS

SUMMARY OF FINDINGS

In 1985, the total value of manufacturers' shipments of insulated wire and cable decreased by 6 percent to $7,586.0 million from the 1984 level of $8,111.2 million. Electronic wire and cable decreased by 7 percent to $1,502.1 million from the 1984 level of $1,613.4 million. Telephone and telegraph wire and cable decreased by 14 percent to $1,379.5 million compared to $1,605.9 million in 1984. Power wire and cable decreased by 4 percent to $980.5 million compared to $1,018.8 million in 1984. In 1985, control and signal wire and cable decreased by 2 percent to $190.1 million compared to the preceding year's figure of $193.6 million. Building wire and cable increased by 3 percent to $1,434.9 million from the 1984 level of $1,387.2 million. Other insulated wire and cable decreased by 2 percent to $576.6 million compared to $588.5 million in 1984. Apparatus wire and cordage and flexible cordage decreased by 10 percent to $781.5 million from the 1984 level of $871.6 million. Magnet wire had a value of shipments for 1985 of $740.8 million, an 11-percent decrease over the 1984 value of $832.8 million.

A description of the survey methodology and related information appears on page 8.

Table 1. VALUE OF SHIPMENTS OF INSULATED WIRE AND CABLE: 1985 AND 1984

(Thousands of dollars)

Product code	Product description	1985	1984
	Insulated wire and cable	7,585,936	8,111,188
3357-	Insulated wire, except magnet wire	6,845,113	7,279,008
3357A pt.	Electronic wire and cable	1,502,053	1,613,371
3357B pt.	Telephone and telegraph wire and cable	1,379,466	1,605,890
33578 --	Power wire and cable	980,513	1,018,751
3357C pt.	Control and signal wire and cable	190,094	193,638
3357D pt.	Building wire and cable	1,434,879	r1,387,245
33576 --	Apparatus wire and cordage	781,470	871,594
3357E pt.	Other insulated wire and cable	576,638	588,519
33577 --	Magnet wire	740,823	832,180

pt. Part. rRevised by 5 percent or more from previously published figures.

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Table 2. SHIPMENTS OF INSULATED WIRE AND CABLE: 1985 and 1984

(Copper content in thousands of pounds; value in thousands of dollars)

Product code	Product description	Number of companies	Shipments, including interplant transfers[1]			
			1985		1984	
			Copper content[2]	Value	Copper content[2]	Value
3357- --	Insulated wire, except magnet wire	(NA)	2,223,597	6,845,113	2,268,223	7,279,008
3357A pt.	Electronic wire and cable	(NA)	177,376	1,502,053	199,719	1,613,371
	Coaxial cable, armored or unarmored:					
3357A 10	Rigid	6	1,402	10,717	1,359	12,350
3357A 12	Semiflexible	22	15,871	267,066	17,880	325,101
	Flexible:					
3357A 13	135 C and over	16	1,853	38,718	1,312	26,297
3357A 14	Under 135 C	31	23,353	244,752	22,245	249,445
3357A 22	Antenna lead-in wire	14	18,981	66,534	16,378	61,627
	Hook-up wire (single conductor, shielded and non-shielded):					
3357A 23	135 C and over temperature rating	27	12,019	178,544	13,457	179,420
3375A 25	Under 135 C temperature rating	49	19,596	94,719	26,107	112,273
	Multiconductor electronic wire and cable (shielded and nonshielded:					
3357A 18	Flat and ribbon cable	22	5,653	73,569	8,340	93,352
3375A 19	Other multiconductor electronic wire and cable	60	78,648	527,434	92,641	553,506
3357B pt.	Telephone and telegraph wire and cable	(NA)	458,659	1,379,466	527,050	1,605,890
3357B 41	Jumper and distributing frame wire, including bank, hand-formed, push-back	8	10,938	44,297	14,495	43,701
3357B 43	Station wire and cable	14	12,045	52,913	18,466	112,304
3357B 72	Switchboard wire and cable (except telephone cord sets and cordage)	9	(D)	(D)	(D)	(D)
3357B 73	Telephone cord sets and cordage	10	2,082	67,563	3,488	108,835
3357B 52	Inside wiring cable	18	25,166	64,871	33,451	109,299
3357B 55	Drop and bridle and duct wire and cable	4	2,966	45,251	3,051	32,264
3357B 68	Rural and urban distribution wire and cable	7	13,672	50,974	10,668	43,408
	Exchange area and toll telephone cable:					
	Paper and pulp insulated:					
3357B 76	Lead covered telephone and telegraph cable (excluding coaxial)	1	(D)	(D)	(D)	(D)
3357B 77	Polyethelene covered telephone and telegraph cable	5	(D)	(D)	(D)	(D)
	Thermoplastic insulated:					
3357B 81	Lead covered telephone and telegraph cable (excluding coaxial)	2	(D)	(D)	(D)	(D)
3357B 82	Polyethylene covered telephone and telegraph cable (excluding coaxial)	11	268,031	733,144	335,149	852,639
33578 --	Power wire and cable	(NA)	252,874	980,513	236,852	1,018,751
33578 01	Mineral insulated cable (including asbestos and varnished cloth)	6	616	7,376	1,197	7,470
	Paper insulated cable (all voltages):					
33578 04	Solid	3	12,769	28,271	(D)	(D)
33578 06	Pipe and other	3	(D)	(D)	(D)	(D)
	Plastic and rubber insulated:					
	600 volts or less:					
33578 08	Portable welding cable	16	19,840	41,557	20,691	44,111
	Portable molded and rubber sheathed:					
33578 10	Cord	5	(D)	(D)	(D)	(D)
33578 11	Cable (mine trailing cable)	8	10,965	35,094	11,074	37,032
33578 12	Portable nonmolded cable	9	(D)	(D)	(D)	(D)
33578 17	Underground distribution cable (UD, URD)	13	5,586	158,730	4,474	186,452
33578 19	Thermoplastic insulated power cable	23	28,234	69,642	30,174	84,728
	Thermoset insulated:					
33578 20	Armored, rubber and cross-linked	12	9,532	20,887	4,769	16,889
33578 21	Unarmored, rubber	11	17,543	36,408	13,661	32,650
33578 22	Unarmored, cross-linked	15	10,688	25,436	10,038	32,366
	Over 600 volts:					
33578 32	Portable molded rubber sheathed cable (mine shovel cable)	9	6,387	21,474	6,843	22,460
33578 35	Portable nonmolded cable	3	469	1,593	613	1,746
33578 37	Underground distribution cable (UD, URD)	11	33,616	216,044	37,265	233,392
33578 39	Thermoplastic insulated power cable	8	1,022	8,887	1,459	8,561
	Thermoset insulated cable:					
	Over 600 volts to 15kv:					
33578 41	Armored, rubber and cross-linked	15	19,736	75,619	16,171	62,372
33578 42	Unarmored, rubber	11	25,043	81,434	22,143	75,467
33578 43	Unarmored, cross-linked	13	29,212	74,835	22,138	61,340
	Over 15 kv:					
33578 46	Rubber	7	1,512	6,015	1,680	6,652
33578 47	Cross-linked	7	1,855	10,268	3,090	13,581
3357C pt.	Control and signal wire and cable	(NA)	38,646	190,094	43,418	193,638
3357C 11	Signal wire and cable	20	11,257	67,980	10,514	65,573
	Control wire and cable (excluding elevator cable):					
3357C 13	Thermoset insulated (including rubber and cross-linked polyethylene)	19	15,075	75,132	14,148	75,449
3357C 14	Thermoplastic insulated	26	12,314	46,982	18,756	52,616

See footnotes at end of table.

Table 2. SHIPMENTS OF INSULATED WIRE AND CABLE: 1985 and 1984--Continued

(Copper content in thousands of pounds; value in thousands of dollars)

Product code	Product description	Number of companies	Shipments, including interplant transfers[1]			
			1985		1984	
			Copper content[2]	Value	Copper content[2]	Value
3357D pt.	Building wire and cable	(NA)	954,742	1,434,879	888,281	1,387,245
	Building wire and cable having underwriters' labels:					
	Thermoset insulated:					
3357D 36	Rubber (R, RH, RHH, RHW, USE, etc.)	7	4,243	7,234	7,794	10,804
3357D 37	Cross-linked polyethylene (XHHW)	20	48,532	74,984	47,494	68,426
3357D 38	Cross-linked polyethylene (USE)	13	12,511	39,027	9,083	35,513
	Thermoplastic insulated:					
3357D 40	Flame-retardant nylon (THHN, THWN)	25	359,473	467,464	283,885	387,856
3357D 41	Moisture resistant (TW)	10	3,823	5,197	5,180	6,823
3357D 48	Moisture and heat resistant (THW)	21	143,331	179,793	178,940	245,014
3357D 51	Service entrance cable (SER, SEU, ASE)	13	11,024	82,845	9,904	85,074
	Nonmetallic branch-circuit and underground feeder:					
3357D 54	Type NM	17	314,302	427,905	296,395	413,916
3357D 55	Type UF and NMC (corrosion resistant)	15	25,744	46,562	26,082	44,017
3357D 57	Metallic armored cable (all AC types)	8	21,812	88,411	19,512	77,458
3357D 58	Other building wire and cable	14	9,947	15,457	4,012	12,344
33576	Apparatus Wire and Cordage[3]	(NA)	214,072	781,470	240,564	871,594
	Flexible cordage:					
33576 13	Thermoset insulated	14	17,342	58,171	17,118	58,398
33576 16	Thermoplastic other than thermoplastic elastomers	16	25,780	77,302	21,593	69,072
33576 17	Thermoplastic elastomers	6	512	1,406	2,732	8,027
33576 42	Extension cord sets	12	31,536	137,638	30,047	128,795
33576 45	Power supply cord (fixed and detachable)	24	28,655	148,494	34,608	170,067
33576 47	Retractile power cords and others	6	1,707	18,823	3,251	27,323
33576 21	Appliance fixture wire	27	33,710	112,228	34,940	120,308
	Appliance wiring material 14 gauge and larger (including motor lead and transformer lead wire):					
33576 23	Thermoset insulated	14	5,663	22,127	6,662	26,923
33576 24	Thermoplastic insulated	23	38,518	87,328	57,177	123,774
33576 28	Submersible pump cable	11	8,447	21,948	8,012	23,279
33576 31	Appliance harness	10	13,245	55,563	13,800	72,493
33576 29	Other apparatus wire and cordage (including machine tool wire)	18	8,957	40,442	10,624	43,135
3357E pt.	Other insulated wire and cable	(NA)	127,228	576,638	132,339	588,519
	Automotive:					
3357E 72	Bulk automotive primary wire	17	47,823	103,994	46,970	90,005
3357E 74	Bulk battery cable	12	8,092	16,360	8,141	18,938
3357E 76	Bulk ignition wire	11	(D)	55,239	(D)	66,779
3357E 78	Other automotive wire and cable	11	19,665	54,879	20,855	58,306
3357E 15	Elevator hatch and traveling cable	3	(D)	(D)	(D)	(D)
3357E 23	Weatherproof cable	6	(D)	(D)	(D)	(D)
	Service drop cable:					
3357E 36	Thermoset insulated	7	(D)	47,074	(D)	49,068
3357E 38	Thermoplastic insulated	11	2,694	43,933	173	36,522
	Airframe, shipboard and ground support cable (excluding coaxial cable and ignition cable):					
3357E 79	Airframe and missile (including ground support cable)	16	3,562	32,088	3,107	25,304
3357E 89	Shipboard cable	12	8,347	35,360	8,484	38,942
3357E 98	Other insulated or covered wire and cable n.e.c.	38	24,055	159,714	24,242	166,504

(D) Data withheld to avoid disclosing figures for individual companies. (NA) Not available. N.e.c. Not elsewhere classified. pt. Part.

[1] Interplant transfers for 1985 totaled 384,901 thousands of dollars and for 1984 totaled 436,813 thousands of dollars. See table 5 for additional data.

[2] Aluminum content for 1985 totaled 328,339 thousands of pounds and for 1984 totaled 330,634 thousands of pounds. See table 3 for additional data.

[3] Data include the following: (a) all known establishments which insulate wire and cable and then fabricate into finished products, and (b) a sample from product class 36996, of establishments manufacturing appliance wire, cord, and flexible cord sets from purchased insulated wire.

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Table 3. ALUMINUM CONTENT OF SELECTED INSULATED WIRE AND CABLE: 1985 and 1984

(Thousands of Pounds)

Product code	Product description	1985	1984
3357- --	Insulated wire, except magnet wire	328,339	330,634
33578 --	Power wire and cable	145,866	155,245
33578 17	Underground distribution cable--600 volts or less	101,999	103,173
33578 37	Underground distribution cable--over 600 volts	28,598	31,434
33578 43	Thermoset insulated cable--unarmored, cross-linked--over 600 volts to 15KV	6,238	5,513
3357D pt.	Building wire and cable	83,490	71,662
3357D 37	Cross-linked polyethylene (XHHW)	13,378	6,792
3357D 38	Cross-linked polyethylene (USE)	16,056	14,464
3357D 48	Moisture and heat resistant (THW)	16,974	18,424
3357D 51	Service entrance cable (SER, SEU, ASE)	33,111	29,233
3357E 23	Weatherproof cable	5,998	(D)
3357E 36	Service drop cable--thermoset insulated	34,417	30,134
3357E 38	Service drop cable--thermoplastic insulated	29,133	23,728

Note: Detail does not add up to total because of disclosure considerations.

(D) Data withheld to avoid disclosing figures for individual companies. pt. Part.

Table 4A. SHIPMENTS OF MAGNET WIRE, INCLUDING INTERPLANT TRANSFERS: 1985

(Gross weight in thousands of pounds; value in thousands of dollars)

Product code	Product description	Number of companies[2]	Shipments, including interplant transfers[1]					
			Gross weight			Value		
			Total	Copper	Aluminum	Total	Copper	Aluminum
33577 --	Magnet wire	(NA)	532,274	478,068	54,206	740,823	639,016	101,807
33577 03	Insulated magnet sheet, strip, and foil	1	(3)	(3)	(3)	(3)	(3)	(3)
33577 07	Film coated, 45 AWG and finer (all classes)	6	(4)	(4)	-	(4)	(4)	-
33577 pt.	Film coated, (44 to 7 AWG and larger)	(NA)	496,538	449,782	46,756	581,128	590,753	90,375
33577 1-	Class 105	(NA)	91,851	82,856	8,995	108,825	93,229	15,596
33577 11	7 AWG and larger round (also all square and rectangle)	6	91,851	13,845	8,995	108,825	16,765	15,596
33577 13	8 to 21 AWG inclusive	8		49,476			44,171	
33577 15	22 to 32 AWG inclusive	11		12,977			15,929	
33577 17	33 to 44 AWG inclusive	11		6,558			16,364	
33577 2-	Class 130	(NA)	71,511	66,928	4,583	126,691	115,968	10,723
33577 21	7 AWG and larger round (also all square and rectangle	1	71,511	20,291	4,583	126,691	26,759	10,723
33577 23	8 to 21 AWG inclusive	11						
33577 25	22 to 32 AWG inclusive	14		36,476			60,468	
33577 28	33 to 44 AWG inclusive	14		10,161			28,741	
33577 3-	Class 155	(NA)	59,030	50,308	8,722	81,324	65,587	15,737
33577 32	7 AWG and larger round (also all square and rectangle	1	32,085	24,296	-	40,936	27,414	-
33577 34	8 to 21 AWG inclusive	9			7,789			13,522
33577 37	22 to 32 AWG inclusive	11	24,759	23,826	933	33,629	31,414	2,215
33577 38	33 to 44 AWG inclusive	11	2,186	2,186	-	6,759	6,759	-
33577 4-	Class 180	(NA)	82,177	70,260	11,917	112,179	90,698	21,481
33577 41	7 AWG and larger round (also all square and rectangle	2	59,891	48,476	11,415	78,864	58,628	20,236
33577 43	8 to 21 AWG inclusive	7						
33577 45	22 to 32 AWG inclusive	10	22,286	21,784	502	33,315	32,070	1,245
33577 47	33 to 44 AWG inclusive	8			-			-
33577 5-	Class 200	(NA)	180,703	171,984	8,719	227,748	210,467	17,281
33577 52	7 AWG and larger round (also all square and rectangle)	6	180,703	24,667	8,719	227,748	34,137	17,281
33577 54	8 to 21 AWG inclusive	9		105,951			118,747	
33577 56	22 to 32 AWG inclusive	10		39,737			53,767	
33577 58	33 to 44 AWG inclusive	6		1,629			3,816	
33577 6-	Class 220	(NA)	11,266	7,446	3,820	24,361	14,804	9,557
33577 61	7 AWG and larger round (also all square and rectangle	5	11,266	3,211	3,820	24,361	5,490	9,577
33577 63	8 to 21 AWG inclusive	7		3,164			6,086	
33577 65	22 to 32 AWG inclusive	5		336			1,262	
33577 67	33 to 44 AWG inclusive	1		735			1,966	
33577 79	Miscellaneous film coated n.e.c	3						
33577 pt.	Nonfilm coated (fibrous and tape)[3] [4]	(NA)	35,736	28,286	7,450	59,695	48,263	11,432
	Class 130 and below	(NA)	35,736	10,786	7,450	59,695	16,358	11,432
33577 81	Fibrous	5						
33577 83	Tape	4		10,786			16,358	
33577 89	Miscellaneous nonfilm coated n.e.c	1						
	Class 155 and above	(NA)		17,500			31,905	
33577 85	Fibrous	6		14,351			23,881	
33577 87	Tape	5		3,149			8,024	

- Represents zero. (NA) Not available. N.e.c. Not elsewhere classified. pt. Part.

[1] Interplant transfers for 1985 totaled 68,928 thousands of pounds of copper and 19,724 thousands of pounds of aluminum and for 1984 totaled 72,383 thousands of pounds of copper and 19,912 thousands of pounds of aluminum.

[2] The number of companies shown is for copper only. The company count for aluminum is available only at the total class level as follows: film coated class 105, 8; film coated class 130, 4; film coated class 155, 7; film coated class 180, 4; film coated class 200, 7; film coated class 220, 5; nonfilm coated, 7.

[3] Data for insulated magnet sheet, strip, and foil are included with nonfilm coated, class 130 and below to avoid disclosing individual company data.

[4] Data for film coated, 45 AWG and finer are included with nonfilm coated class 130 and below to avoid disclosing individual company data.

Table 4B. SHIPMENTS OF MAGNET WIRE, INCLUDING INTERPLANT TRANSFERS: 1984

(Gross weight in thousands of pounds; value in thousands of dollars)

Product code	Product description	Number of companies[2]	Shipments, including interplant transfers[1]					
			Gross weight			Value		
			Total	Copper	Aluminum	Total	Copper	Aluminum
33577 --	Magnet wire	(NA)	574,636	521,270	53,366	832,180	722,623	109,557
33577 03	Insulated magnet sheet, strip, and foil	1	([3])	([3])	([3])	([3])	([3])	([3])
33577 07	Film coated, 45 AWG and finer (all classes)	6	([4])	([4])	-	([4])	([4])	-
33577 pt.	Film coated, (44 to 7 AWG and larger)	(NA)	536,931	487,616	49,315	770,064	668,062	102,002
33577 1-	Class 105	(NA)	90,139	80,280	9,859	120,449	100,803	19,646
33577 11	7 AWG and larger round (also all square and rectangle)	6		12,731			16,224	
33577 13	8 to 21 AWG inclusive	9	90,139	49,718	9,859	120,449	54,901	19,646
33577 15	22 to 32 AWG inclusive	12		13,396			18,230	
33577 17	33 to 44 AWG inclusive	9		4,435			11,448	
33577 2-	Class 130	(NA)	89,438	84,578	4,860	156,730	144,996	11,734
33577 21	7 AWG and larger round (also all square and rectangle)	2						
33577 23	8 to 21 AWG inclusive	11	89,438	28,255	4,860	156,730	36,164	11,734
33577 25	22 to 32 AWG inclusive	14		42,798			69,864	
33577 28	33 to 44 AWG inclusive	14		13,525			38,968	
33577 3-	Class 155	(NA)	67,605	58,360	9,245	100,755	83,517	17,238
33577 32	7 AWG and larger round (also all square and rectangle)	1			-			-
33577 34	8 to 21 AWG inclusive	9	35,784	27,443	8,341	50,041	35,013	15,028
33577 37	22 to 32 AWG inclusive	13	29,028	28,124	904	41,771	39,561	2,210
33577 38	33 to 44 AWG inclusive	11	2,793	2,793	-	8,943	8,943	-
33577 4-	Class 180	(NA)	87,600	75,332	12,268	111,255	87,399	23,856
33577 41	7 AWG and larger round (also all square and rectangle)	3						
33577 43	8 to 21 AWG inclusive	6	69,304	57,530	11,774	83,448	60,993	22,455
33577 45	22 to 32 AWG inclusive	8			494			1,401
33577 47	33 to 44 AWG inclusive	7	18,296	17,802	-	27,807	26,406	-
33577 5-	Class 200	(NA)	190,854	182,084	8,770	253,777	234,149	19,628
33577 52	7 AWG and larger round (also all square and rectangle)	6		25,715			36,558	
33577 54	8 to 21 AWG inclusive	9	190,854	117,537	8,770	253,777	140,206	19,628
33577 56	22 to 32 AWG inclusive	10		36,979			52,926	
33577 58	33 to 44 AWG inclusive	5		1,853			4,459	
33577 6-	Class 220	(NA)	11,295	6,982	4,313	27,098	17,198	9,900
33577 61	7 AWG and larger round (also all square and rectangle)	4		3,285			5,940	
33577 63	8 to 21 AWG inclusive	7		2,501			7,246	
33577 65	22 to 32 AWG inclusive	6	11,295	338	4,313	27,098	1,334	9,900
33577 67	33 to 44 AWG inclusive	1		858			2,678	
33577 79	Miscellaneous film coated n.e.c.	5						
33577 pt	Nonfilm coated (fibrous and tape)[3] [4]	(NA)	37,705	33,654	4,051	62,116	54,561	7,555
	Class 130 and below	(NA)		17,223			25,783	
33577 81	Fibrous	7						
33577 83	Tape	3		17,223			25,783	
33577 89	Miscellaneous nonfilm coated n.e.c.	1	37,705		4,051	62,116		7,555
	Class 155 and above	(NA)		16,431			28,778	
33577 85	Fibrous	7		14,754			24,955	
33577 87	Tape	4		1,677			3,823	

- Represents zero. (NA) Not available. N.e.c. Not elsewhere classified. pt. Part.

[1] Interplant transfers for 1985 totaled 68,928 thousands of pounds of copper and 19,724 thousands of pounds of aluminum and for 1984 totaled 72,383 thousands of pounds of copper and 19,912 thousands of pounds of aluminum.

[2] The number of companies shown is for copper only. The company count for aluminum is available only at the total class level as follows: film coated class 105, 9; film coated class 130, 5; film coated class 155, 7; film coated class 180, 5; film coated class 200, 7; film coated class 220, 4; nonfilm coated, 6.

[3] Data for insulated magnet sheet, strip, and foil are included with nonfilm coated, class 130 and below to avoid disclosing individual company data.

[4] Data for film coated, 45 AWG and finer are included with nonfilm coated class 130 and below to avoid disclosing individual company data.

Table 5. VALUE OF INTERPLANT TRANSFERS OF SELECTED INSULATED WIRE AND CABLE: 1985 and 1984

(Thousands of dollars)

Product code	Product description	1985	1984
3357-	Insulated wire, except magnet wire	384,901	436,813
3357A pt.	Electronic wire and cable	16,916	24,153
3357B pt.	Telephone and telegraph wire and cable	84,385	95,639
33578 --	Power wire and cable	89,811	108,949
3357C pt.	Control and signal wire and cable	5,052	874
3357D pt.	Building wire and cable	15,889	26,206
33576 --	Apparatus wire and cordage	86,206	100,977
33576 21	Appliance fixture wire	6,422	8,213
33576 24	Appliance wiring material--thermoplastic insulated	14,344	22,752
3357E pt.	Other insulated wire and cable	86,642	80,015
3357E 74	Bulk battery cable	2,516	3,336
	Bulk ignition wire	17,520	24,189

pt. Part.

Table 6. COMPARISON OF VALUES OF SHIPMENTS OF INSULATED WIRE AND CABLE, AS REPORTED IN THE MA33L, THE 1984 ANNUAL SURVEY OF MANUFACTURES, AND THE 1982 CENSUS OF MANUFACTURES[1]

(Value in millions of dollars)

Product code	Product description	1984			1982	
			Annual Survey of Manufactures[2]			
		MA33L	Value	Standard error of estimates[3]	MA33L	Census of Manufactures
3357A pt.	Electronic wire and cable	1,613.4	1,606.8	2	1,303.5	1,304.4
3357B pt.	Telephone and telegraph wire and cable	1,605.9	1,629.1	2	1,814.4	1,815.2
3357C pt.	Control and signal wire and cable	193.6	181.8	5	247.5	248.8
3357D pt.	Building wire and cable	1,387.2	1,324.9	1	1,084.5	1,083.6
3357E pt.	Other insulated wire and cable	588.5	569.6	5	539.9	550.6
33576[4] -- 36996[4] --	Apparatus wire and cordage	871.6	979.3	(NA)	585.6	648.6
33577 --	Magnet wire	832.2	792.6	3	698.4	747.0
33578 --	Power wire and cable	1,018.8	1,003.7	6	853.9	854.5

pt. Part. (NA) Not available.

[1] Comparable estimates from the 1985 Annual Survey of Manufactures will be published at a later date.
[2] Source: 1984 Annual Survey of Manufactures Value of Product Shipments, M84(AS)-2.
[3] The annual survey of manufactures percentage standard errors shown are the approximate relative errors of the estimates of level. A more detailed description of the standard error of estimate is given in the introduction of the annual survey of manufactures, Value of Product Shipments, M84(AS)-2, under "Qualifications of the Data."
[4] See footnote 3 at end of table 2.

Table 7. SHIPMENTS, EXPORTS, IMPORTS, AND APPARENT CONSUMPTION OF INSULATED WIRE AND CABLE: 1985 AND 1984

(Value in thousands of dollars)

Product code	Product description	Manufacturers' shipments (value f.o.b. plant)	Exports of domestic merchandise[1] [2]		Percent exports to manufacturers' shipments	Imports for consumption[4] [5]	Apparent consumption[6]	Percent imports to apparent consumption
			Value at port	Estimated producers' value[3]				
	1985							
	Insulated wire, including magnet wire.....	7,585,936	357,881	335,478	4.4	587,719	7,838,177	7.5
3357A	Electronic wire and cable.....	1,502,053	63,020	59,075	3.9			
3357B	Telephone and telegraph wire and cable.....	1,379,466	20,065	18,809	1.4			
3357E	Power wire and cable[7].....	980,513	60,948	57,133	5.8			
3357C	Control and signal wire and cable.....	190,094						
3357D	Building wire and cable.....	1,434,879	172,431	161,637	7.3	587,719	7,838,177	7.5
3357E	Other insulated wire and cable.....	576,638						
33576	Apparatus wire and cord and flexible cord							
36996	sets.....	781,470	23,960	22,460	2.9			
33577	Magnet wire.....	740,823	17,457	16,364	2.2			
	1984							
	Insulated wire, including magnet wire.....	8,111,188	356,467	334,152	4.1	541,785	8,318,821	6.5
3357A	Electronic wire and cable.....	1,613,371	63,994	59,988	3.7			
3357B	Telephone and telegraph wire and cable.....	1,605,890	32,523	30,487	1.9			
3357E	Power wire and cable[7].....	1,018,751	55,858	52,361	5.1			
3357C	Control and signal wire and cable.....	193,638						
3357D	Building wire and cable.....	1,387,245	159,893	149,884	6.9	541,785	8,318,821	6.5
3357E	Other insulated wire and cable.....	588,519						
33576	Apparatus wire and cord and flexible cord							
36996	sets.....	871,594	20,560	19,273	2.2			
33577	Magnet wire.....	832,180	23,639	22,159	2.7			

[1] Source: Bureau of the Census data relating to EM 546, U.S. Exports (see table 7 for a comparison of SIC-based codes and import and export numbers).
[2] This dollar value represents the c.i.f. (cost, insurance, and freight) value at the first port of entry in the United States plus duties.
[3] These values are derived by use of adjustment factors to exclude freight, insurance, and other charges incurred in moving goods to the port of export. This adjustment is made to convert the values to an approximation of the producers' value of exported goods. Current adjustment factors are based on data for 1983 which are published in Origin of Exports of Manufactured Products, M83(AS)-5. The 1983 derived adjustment factor is 0.9374.
[4] Source: Bureau of the Census data relating to IM 145-X, U.S. Imports for Consumption and General Imports. These figures include both import value and duty value.
[5] These import data include other items such as Christmas tree lights, ignition harness sets, ignition wiring sets, etc.
[6] Apparent consumption is derived by subtracting exports from the total of manufactures shipments plus imports (including duty). Estimated producers' value is used in the calculation of these data.
[7] The manufacturers' shipments for power wire and cable include mineral and paper insulated cable, while the export figures do not.

Table 8. COMPARISON OF SIC-BASED PRODUCT CODES AND IMPORT AND EXPORT NUMBERS: 1985

Product code	Product Description	Export number[1]	Import number[2]
3357A	Electronic wire and cable.....	688.0240	
3357B	Telephone and telegraph wire and cable.....	688.0220	
3357E	Power wire and cable.....	688.1420 688.1450	
3357C	Control and signal wire and cable.....	688.1700	688.0410,688.0415,688.0425,688.0430,
3357D	Building wire and cable.....	688.1900	688.0450,688.0465,688.0600,688.0700,
3357E	Other insulated wire and cable.....		688.1700,688.1800,688.1900
33576 36996	Apparatus wire and cord and flexible cord sets.....	688.0800	
33577	Magnet wire.....	688.1820 688.1840 688.1860	

[1] Source: 1985 Edition Schedule B, Statistical Classification of Domestic and Foreign Commodities Exported from the United States.
[2] Source: Tariff Schedule of the United Sates Annotated (TSUSA), 1985.

DESCRIPTION OF SURVEY

Scope of Survey. This survey covers companies engaged in manufacturing insulated wire and cable and/or fabricating appliance wire, cord, or flexible cordage from purchased insulated wire.

Survey Methodology. The statistics in this publication were collected by mail on Bureau of the Census annual Form MA33L, Insulated Wire and Cable. The survey panel includes all known insulators of wire and cable, as well as the largest producers of appliance wire, cord, and flexible cord sets from purchased insulated wire as measured by the dollar value of shipments from the 1982 Census of Manufactures. No estimate is included for the smaller fabricators. The total number of companies is approximately 220.

Reliability of Data. Survey error may result from several sources: (1) inability to obtain information about all cases in the survey; (2) response errors; (3) definitional difficulties; (4) differences in the interpretation of questions; (5) mistakes in recording or coding the data obtained; and (6) other errors of collection, response, coverage, and estimation for missing data. These nonsampling errors also occur in complete censuses. Although no direct measurement of the biases due to nonsampling errors has been obtained, precautionary steps were taken in all phases of the collection, processing, and tabulation of the data in an effort to minimize their influence.

A major source of bias in the published estimates is due to imputing data for nonrespondents, for late reporters, and for data which fail logic edits. Missing figures are imputed based on yearly movements shown by reporting firms. Imputation generally is limited to a maximum of 10 percent for any one data cell. Figures with imputation rates greater than 10 percent are footnoted.

The imputation rate is not an explicit indicator of the potential error in published figures due to nonresponse, because the actual yearly movements for nonrespondents may or may not closely agree with the imputed movements. The range of difference between the actual and imputed figures is not precisely known, but is assumed to be small. The degree of uncertainty regarding the accuracy of the published data increases as the percentage of imputation increases. Figures with imputation rates above 10 percent should be used with caution.

Revisions to Previous Period Data. Statistics for previous years may be revised as the result of corrected data from respondents, late reports for which imputations were made as described above, or other corrections. Figures which have been revised by more than 5 percent from previously published figures are indicated by footnotes.

Revisions include changes to prior period data resulting from reconciliation of the results of this survey with the 1984 Annual Survey of Manufactures to correct differences in reported data between the two series and to identify and verify new establishments included in the scope of this survey. Table 6 presents a comparison of data from the two series by census product class following the reconciliation.

Adjustment for Price Change. All dollar figures included in this publication are in current dollars; i.e., they have been adjusted for price change.

EXPLANATION OF TERMS

Quantity and Value of Shipments. The figures on quantity and value of shipments represent physical shipments of all products sold, transferred to other establishments of the same company, or shipped on consignment, whether for domestic or export sale. The value represents the net sales price, f.o.b. plant, to the customer or branch to which the products are shipped, net of discounts, allowances, freight charges, and returns. Shipments to a company's own branches are assigned the same value as comparable sales to unaffiliated customers; i.e., the value includes an appropriate allocation of company overhead and profit. Products bought and resold without further manufacture are excluded.

Gross Weight. Includes insulating materials but excludes packaging materials.

AWG. American Wire Gauge.

Dual Rated Products. All dual rated products are classified according to their highest ratings.

Multi-insulated Cables. All multi-insulated cables are classified according to their primary insulation, i.e., the layer of material designed to do the electrical insulating, usually the first layer of material applied over the conductor.

Insulated Wire and Cable. All insulated wire and cable for transmitting electric energy, signals, or communications. Excludes bare and tinned wire and cable and Aluminum Cable Steel Reinforced (ASCR).

Magnet Wire (Including Insulating Magnet Strip Conductor). All insulated wire of the type generally used in the winding of coils, including Litz wire and including insulating magnet sheet, strip, and foil. The thermal classification for bondable wires are determined by the underlying insulation. Also, the combination (film-fabric) product is classified based on the insulation on the top side.

Electronic Wire and Cable. All single and multiconductor wire and cable used for transmission, reception, or reproduction of electrical frequencies (16 gauge and smaller). Excludes telephone cable. See "apparatus wire and cable" for larger gauges.

Telephone Wire and Cable. All wire and cables used in the telephone industry to transmit, receive, and monitor communications signals. Excludes coaxial and other electronic wire and cable.

Power Wire and Cable. All insulated wire and cable used for the transmission and distribution of electrical energy. Excludes communications, aircraft, and marine types.

Control and Signal Wire and Cable. All insulated wire and cable used to transmit signals to control and actuate relays, valves, servo-mechanisms and related devices, including traffic control cable and fire alarm cable. Excludes elevator hatch and traveling cable.

Building Wire and Cable. All wire and cable (less than 600 volts) having UL labels, used within structures for light and power.

Apparatus Wire and Cordage. Insulated wire and cable used in connecting electrical apparatus to a power source, and appliance wiring material (14 AWG and larger) used for internal wiring. See "electronic wire and cable" for appliances wiring material smaller than 14 AWG.

Other Insulated Wire and Cable. Includes bulk automotive battery and ignition wire, elevator hatch and traveling cable, weatherproof and service drop cable, airframe, shipboard, and ground support cable.

COMPARISON OF EXPORT, IMPORT, AND DOMESTIC OUTPUT DATA

The Standard Industrial Classification (SIC) system used for domestic output and the statistical export and import commodity classifications were developed independently. This results in considerable difficulty in comparing the three types of data for many commodity areas. The domestic output classification is based on type of industry; on the other hand, the export and import classification system is more materials oriented. Also, there are a substantial number of imported commodities which have no comparable domestic output classification. The relationships shown in this report should be considered only as approximations, since, in addition to the problems mentioned above, there are also the following problems affecting the comparability of the three sets of data.

Valuation. There are different methods of valuation for the three types of data:

- *Domestic Output*—Valued at the point of production. It includes the net sales price, f.o.b. plant, after discounts and allowances, exclusive of freight charges and excise taxes.

- *Exports*—Valued at the point of exportation. It includes the selling price, or cost if not sold, and inland freight, insurance and other charges to the export point.

  Estimated producers' values of exports have also been developed. These values more closely approximate the values reported for domestic output because they exclude freight, insurance, and other charges applied from the producing plant to the export point.

- *Imports*—Valued at the first port of entry in the United States. It includes c.i.f. (cost, insurance, and freight), duty, and other charges to the import point.

Duplication in Quantity and Value of Output. Because producers' shipments of some commodities may be used as materials for incorporation into other commodities, combinations of data for such commodities may contain a certain amount of duplication. Thus, percentages of exports to output or imports to apparent consumption (output plus imports minus exports) at four-digit or broader levels may be understated. Where duplication is known to be substantial, the output data are appropriately noted in the table.

Low-Value Export and Import Transactions. Detailed commodity information is not included for individual export shipments valued at not more than $1,000. Generally, detailed commodity information is not included for individual import shipments valued at not more than $1,000. For textiles and textile products, gloves, footwear, and miscellaneous rubber and plastics products, detailed commodity information is not included for individual import shipments valued at not more than $250. This is believed to have only negligible effects on the statistics for the bulk of the commodities.

Manufacturers' Shipments, Not Specified by Kind. The value of manufacturers' shipments at the four-digit industry level often includes a small amount which is not distributed among the individual five-digit product classes. Export and import percentages at the more detailed levels might, therefore, be slightly overstated.

Time Lag Between Output and Exports. There will be a lag between the time a commodity is produced or shipped by the producer and the time it is actually exported, especially when intermediaries (wholesalers, exporters, etc.) are involved. Ordinarily, this type of discrepancy is insignificant in annual figures.

"Direct" vs "Total" Commodity Exports and Imports. Export and import data do not include materials which are incorporated into other more finished products and exported or imported in finished form. Thus, by showing only direct exports and imports, the relation of exports to output and imports to apparent consumption for intermediate products is considerably understated.

Used Commodities. With a few exceptions, used or rebuilt commodities are classified in the same import or export codes as is new merchandise. Percentages are thus overstated to the extent that used or rebuilt products are significant in trade.

Geographic Area of Coverage. Import and export data reflect the movement of merchandise into and out of U.S. foreign trade zones, the U.S. Virgin Islands, and the U.S. customs territory (includes the 50 States, the District of Columbia, and Puerto Rico).

HISTORICAL NOTE

Data on insulated wire have been collected by the Bureau of the Census since 1965. Historical data may be obtained from Current Industrial Reports available at your local Federal Depository Library. A list of these libraries may be obtained from the Bureau of the Census regional offices:

Office	Telephone
Atlanta, Georgia	(404) 881-2271
Boston, Massachusetts	(617) 223-2327
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Chicago, Illinois	(312) 353-6251
Dallas, Texas	(214) 767-0621
Denver, Colorado	(303) 234-3924
Detroit, Michigan	(313) 226-7742
Kansas City, Kansas	(816) 374-4601
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CONTACTS FOR DATA USERS

Subject Area	Contact	Phone Number
Current Industrial Report MA33L	Ed Coan	(301) 763-5547
Manufacturers' Shipments Inventories and Orders	Ruth Runyan	(301) 763-2502
Classification Systems Comparability	James Kristoff (ESD)	(301) 763-1935
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Census/ASM	Dale Gordon	(301) 763-7304
To order a Census Bureau publication	Customer Services (DUSD)	(301) 763-4100
International Trade Administration	Robert C. Reiley	(202) 377-0575

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